REMARKS

Applicants have carefully considered this Application in connection with the Examiner's Action, and respectfully request reconsideration of this Application in view of the above Amendment and the following remarks.

Applicants have amended the Specification at Page 12, line 5 to correct an inadvertent error. The incorrect figure of 7356000 ppm, which is an amount of sulfate ions that a person of skill in the art would recognize as obviously too high, was mistakenly included. Applicants have added the correct figure of 1422160 ppm.

Applicants have amended Claims 1, 9, 11, 12, 14, 16, 17, 19, 20, 23, 25, 33, 35, 36, 38, 39, 43, 52, 65, 73, 75, 76, 78, 80, and 85. Applicants have cancelled Claims 10, 21, 34, and 74, in addition to Claims 2, 26, 60 – 64, and 66, which were previously cancelled.

Claims 1, 19, 23, 25, 65, and 85 have been amended to clarify that the salts of phosphoric acid and calcium are inorganic salts. Support for these amendments can be found in the Specification at Page 8, lines 1 – 11. Claims 1, 19, 23, 25, 43, 52, 65, and 85 have also been amended to clarify that AGIIS, which may be generated in situ, is produced from a mixture comprising sulfuric acid and calcium hydroxide, or an inorganic calcium salt, or a mixture of the two. Support for these amendments can be found in the Specification at Page 7, lines 11 – 26. Claims 9, 11, 12, 14, 16, 17, 20, 33, 35, 36, 38, 39, 73, 75, 76, 78, and 80 have been amended to clarify that the additive is an alcohol, an organic acid, a surface active agent, a periodic acid, or a mixture thereof. Support for these amendments can be found in the Specification at Page 13, line 8 to Page 14, line 6.

Claims 1, 19, 23, 25, 43, 52, 65, and 85 have been amended to delete the phrase "the mole ratio of calcium hydroxide to sulfuric acid is less than about 0.5." These claims have also been amended to add the phrase "wherein for every mole of sulfuric acid, the calcium hydroxide used is

less than or equal to 0.45 moles." Support for these amendments can be found in the Specification at Page 15, line 24; Page 17, line 6; and Page 18, line 10.

Pending in the application are Claims 1, 3 – 9, 11 – 20, 22 – 25, 27 – 33, 35 – 59, 65, 67 – 73, and 75 – 102.

1. Rejections Under 35 U.S.C. §112, First Paragraph

A. Enablement

Claims 1, 3 – 25, 27 – 59, and 65 – 102 stand rejected under 35 U.S.C. §112, first paragraph for being non-enabling for the processes described in these claims. The Examiner asserts that the claims are only enabled for the processes using inorganic salts of phosphoric acid and calcium. The Examiner also asserts that the claims are only enabled for processes using an additive selected from alcohols, organic acids, periodic acids, or surfactants.

Applicants have amended Claims 1, 19, 23, 25, 65, and 85 above to recite that the salts of phosphoric acid and calcium are inorganic salts Applicants have also amended Claims 9, 11, 12, 14, 16, 17, 20, 33, 35, 36, 38, 39, 73, 75, 76, 78, and 80 to recite that the additive is an alcohol, an organic acid, a periodic acid, a surfactant, or a mixture thereof. For these reasons, Applicants respectfully submit that the pending claims are enabled and patentable under 35 U.S.C. §112, first paragraph.

B. Written Description

Claims 1, 3 – 25, 27 – 59, and 65 – 102 stand rejected under 35 U.S.C. §112, first paragraph for failing to comply with the written description requirement. The Examiner asserts that the specification does not support the limitation of "less than about 0.5" with regard to the mole ratio of calcium hydroxide to sulfuric acid. Applicants have deleted this limitation from the claims.

Instead, Applicants have added the phrase "wherein for every mole of sulfuric acid, the calcium hydroxide used is less than or equal to 0.45 moles." Applicants assert that this language is supported by the written description. As the Examiner has pointed out, the Specification contains

three examples of preferred mole ratios of calcium hydroxide to sulfuric acid. Every one of the cited examples shows a mole ratio of less than 0.5. More particularly, **every one of the examples shows a mole ratio of less than or equal to 0.45**. Thus, this claim language is clearly supported the Specification. The examples are merely illustrative and should not be considered as limitations on the scope of claims. *See Ziegler v. Phillips Petroleum Co.*, 483 F.2d 858, 177 U.S.P.Q. 481, 493 (5th Cir. 1973).

Furthermore, the three examples in the Specification are not intended to, nor required to, delineate the exact numerical range of mole ratios which are supported and enabled in the application. Simply because the mole ratio of calcium hydroxide to sulfuric acid was not calculated and listed in each example of AGIIS does not mean that the mole ratios within the range of less than or equal to 0.45 are not supported. The three examples on Pages 15 – 18 of the Specification show a clear relationship between the mole ratio of calcium hydroxide to sulfuric acid and the acid normality of the AGIIS. In Example 1, the mole ratio is 0.45 and the acid normality is 1.2 to 1.5 N. In Example 2, the mole ratio is 0.44 and the acid normality is 2 N. The third example shows the lowest mole ratio, 0.31. and the highest acid normality, 12 N. However, the Specification also clearly supports AGIIS solutions having acid normalities as high as 36 N and 29 N. See Page 11, line 19 and Page 12, lines 4 – 6. Thus, the Specification also supports mole ratios of calcium hydroxide to sulfuric acid which are much lower than 0.31. It is the function of the descriptive portion of the specification and not that of the claims to set forth operable proportions and similar process parameters. *See Ex parte Jackson, Theriault, Sinclair, Fager, and Karwowski*, 217 U.S.P.Q. 804, 806 (PTO Bd. App. 1982). Because the Specification clearly provides support for extremely high acid normalities of AGIIS and their concomitant low mole ratios of calcium hydroxide to sulfuric acid, the claim language "wherein for every mole of sulfuric acid, the calcium hydroxide used is less than or equal to 0.45 moles" satisfies the written description requirement.

C. Indefiniteness

Claims 1, 3 – 25, 27 – 59, and 65 – 102 stand rejected under 35 U.S.C. §112, first paragraph for being indefinite. The Examiner asserts that it is uncertain how the AGIIS can be isolated from a

mixture of sulfuric acid and calcium hydroxide, or a calcium salt, or a mixture of the two, when the claims also state that AGIIS can be generated in situ.

Applicants have amended Claims 1, 19, 23, 25, 43, 52, 65, and 85 to clarify that the AGIIS is produced from a mixture of sulfuric acid and calcium hydroxide, or a calcium salt, or a mixture of the two. The AGIIS is not necessarily isolated from the mixture, particularly if it is generated in situ, although it is capable of being isolated. In order to clarify the claim language, however, Applicants have elected to use the term "produced from" rather than "isolated from." For this reason, Applicants respectfully assert that the claims are no longer indefinite.

2. Rejections Under 35 U.S.C. §103(a)

A. U.S. Patent No. 5,087,467 to Schwank, in view of U.S. Patent No. 6,375,976 to Roden et al. and U.S. Patent No. 5,087,467 to Wurzburger et al.

Claims 1, 3 – 15, 17 – 25, 27 – 38, 40 – 59, 65, 67 – 79, and 81 – 102 also stand rejected as being unpatentable over U.S. Patent No. 5,087,467 to Schwank ("Schwank") in view of U.S. Patent No. 6,375,976 to Roden et al. ("Roden") and U.S. Patent No. 5,087,467 to Wurzburger et al. ("Wurzburger"). Applicants respectfully submit that the references in combination do not render the claimed subject matter obvious because they do not suggest the claimed composition, as amended.

Neither Schwank nor Roden disclose Applicants' claimed composition because **neither Schwank nor Roden nor the references in combination suggest AGIIS, which is produced from a mixture comprising sulfuric acid and calcium hydroxide, or a calcium salt, or a mixture of calcium hydroxide and a calcium salt.**

In addition, Wurzburger does not suggest Applicants' claimed composition either alone or in combination with Schwank and Roden. because **Wurzburger does not disclose a solution or suspension of AGIIS which is isolated from a mixture comprising sulfuric acid and calcium hydroxide, or a calcium salt, or a mixture of calcium hydroxide and a calcium salt, wherein for every mole of sulfuric acid, the calcium hydroxide and calcium salt used is less than or equal to 0.45 moles**. Wurzburger discloses an acidic composition that is an equimolar mixture of an acid,

such as sulfuric acid, with a chemically equivalent amount of a base, such as calcium hydroxide. See, Wurzburger, Col. 4, lines 45 – 49. The solution remaining in Wurzburger after the precipitate is filtered contains **not more than 2500 ppm sulfate ions**. *See*, Wurzburger, Col. 4, lines 58 - 61. In another embodiment, Wurzburger describes the level of **sulfate union to be less than 50 ppm**. *See*, Col. 4, lines 65-66. More importantly, **the compositions of Wurzburger are different from the AGIIS of the instant application**. ***The levels of sulfate ions in Wurzburger compositions are much lower than the levels of sulfate ions in AGIIS compositions***. AGIIS with a final acid normality of about 1.2 N contains about 73560 ppm of sulfate ions. *See*, page 12, line 2, of the specification. AGIIS with a final acid normality of about 29 N contains about 1422160 ppm of sulfate ions. *See*, page 12, line 5, of the amended specification. Thus, at either of the two extremes of final acid normality (i.e. around 1.2 N and 29 N) AGIIS contains sulfate ions that is at least about 30 times, and up to about 560 times, higher than the sulfate ions of one embodiment of Wurzburger composition; and at least about 1,470 times, and up to about 28,400 times, higher than the sulfate ions of another embodiment of Wurzburger composition. **Accordingly, the Wurzburger compositions are, and must be, different from the AGIIS of the present invention.**

In the current Office Action, the Examiner asserts that Applicants made no showing that the limitation "about 0.5" excluded equimolar amounts of calcium hydroxide and sulfuric acid. Applicants respectfully assert that the clause "wherein for every mole of sulfuric acid, the calcium hydroxide and calcium salt used is less than or equal to 0.45 moles" clearly excludes equimolar amounts of calcium hydroxide and sulfuric acid.

The Examiner also asserts that Wurzburger discloses the use of calcium oxide or calcium hydride instead of calcium hydroxide and that there is no limitation with respect to these calcium salts. Wurzburger clearly requires that all metal compounds be used in gram equivalent or equimolar amounts with regard to sulfuric acid, regardless of whether the compound is calcium hydroxide, calcium oxide, or calcium hydride. See Wurzburger, Col. 5, lines 36 – 48 and Col. 6, lines 25 – 26. By contrast, Applicants' claims refer to a mole ratio of 0.45 or less of calcium hydroxide and calcium salt to sulfuric acid. Thus, the claims are not suggested by Wurzburger. Neither Schwank, nor Roden, nor Wurzburger, nor the three references in combination suggest an

acidic composition wherein for every mole of sulfuric acid used, the calcium hydroxide and calcium salt used is less than or equal to 0.45 moles.

In conclusion, neither Schwank, nor Roden, nor Wurzburger, nor the references in combination render Claims 1, 3 – 15, 17 – 25, 27 – 38, 40 – 59, 65, 67 – 79, and 81 – 102 obvious.

3. Double Patenting

Claims 1, 3 – 15, 17 – 25, 27 – 38, 40 – 59, 65, 67 – 79, and 81 – 102 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1 – 13, 39 – 41, and 79 of U.S. Patent Application Serial No. 09/500,473 or Claims 19, 38, and 51 – 56 of U.S. Patent Application Serial No. 09/655,131, in view of Schwank, Roden, and Wurzburger. Applicants have submitted terminal disclaimers to overcome both of these commonly owned applications.

Claims 1, 3 – 15, 17 – 25, 27 – 38, 40 – 59, 65, 67 – 79, and 81 – 102 also stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 21 of U.S. Patent No. 6,572,908 in view of Schwank, Roden, and Wurzburger. Applicants have submitted a terminal disclaimer to overcome this commonly owned patent.

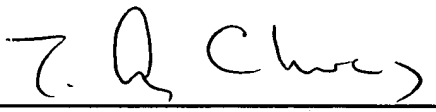
Applicants respectfully request that the rejections based on nonstatutory double patenting be withdrawn.

4. Conclusion

Applicants respectfully submit that, in light of the foregoing Amendment and comments, Claims 1, 3 – 9, 11 – 20, 22 – 25, 27 – 33, 35 – 59, 65, 67 – 73, and 75 – 102 are in condition for allowance. A Notice of Allowance is therefore requested.

If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible.

Respectfully submitted,



T. Ling Chwang
Registration No. 33,590
JACKSON WALKER L.L.P.
2435 North Central Expressway, #600
Richardson, TX 75080
Tel: (972) 744-2919
Fax: (972) 744-2909

September 24, 2004
Date